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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/500,446	02/09/2000	Katsuhiko Tachibana	Q57866	2630

7590 10/11/2002

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2100 Pennsylvania Avenue NW  
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EXAMINER

BISSETT, MELANIE D

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 10/11/2002

12

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/500,446	Applicant(s) TACHIBANA ET AL.	
	Examiner Melanie D. Bissett	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Continued Prosecution Application***

1. The request filed on 7/25/02 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/500,446 is acceptable and a CPA has been established. An action on the CPA follows.

***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 4-6, and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over NITTO DENKO CORPORATION in view of Johnson et al. and further in view of Ehrenberg et al.

4. NITTO DENKO discloses PSA compositions comprising polymers with polycarbonate structures, where the polycarbonates fit the applicant's general formula (abstract). Polymers having  $M_w$  values of 10,000-300,000 include polyesters synthesized using polycarbonate diols with dicarboxylic acids, polyesters synthesized using polycarbonate dicarboxylic acids and diols, and polyurethanes synthesized using polycarbonate diols and diisocyanates (p. 5 lines 40-47). The reference teaches using the PSA compositions in sealing material applications by applying the PSA to a synthetic resin film such as a foamed material (p. 11 lines 34-40), where the adhesive layer may be a multi-layer structure using other PSA compositions for improved adhesion (p. 11 lines 52-56). However, the reference lacks express mention of the

cellular structures of the foam used or the multi-layer structure containing a "subbing" PSA layer. Johnson teaches a multi-layer sealant article, where a closed-cell foam sealant is provided with a bonding layer, preferably an acrylic PSA layer (abstract; col. 3 lines 41-49; col. 20 lines 10-34). The use of tie or primer layers between the foam sealant and the bonding layer improves adhesion between the foam and bonding layer, where suitable tie/primer layers include PSA compositions (col. 8 line 58-col. 9 line 4). It is the examiner's position that it would have been prima facie obvious to form a multi-layer adhesive structure containing a tie layer to improve the adhesion between the PSA and sealing materials of NITTO DENKO's invention. Note that Johnson et al. prefers the use of closed-cell sealant foams in the invention but does not specify motivation for choosing such a material. Ehrenberg teaches that closed cells in a foam material serve to improve the water impermeability of a sealing strip material (col. 6 lines 24-27). From the teachings of Johnson and Ehrenberg, it is the examiner's position that it would have been prima facie obvious to use a foam material having closed cells to improve the water impermeability of NITTO DENKO's sealant articles.

5. Regarding claims 12-13 limiting the inner PSA layer, it has been shown that NITTO DENKO suggests using multi-layered adhesive structures using other PSA compositions (see p. 9 lines 32-47; p. 11 lines 52-56). However, the reference does not specifically indicate PSA compositions to be used with the polycarbonate adhesive in multi-layered PSA structures. The reference does teach the conventionality of acrylic and rubber adhesives (p. 8 lines 29-34; p. 9 line 58-p. 10 line 7; p. 12 lines 17-25). Furthermore, the polycarbonate adhesives of the reference employ acrylic polymers into

the compositions (p. 8 lines 24-57), showing the acrylic polymer's increased adhesion to plastic substrates. Because of the conventionality of acrylic adhesives, and because the acrylic polymers are already present in the polycarbonate layer, it is the examiner's position that it would have been prima facie obvious to choose an acrylic PSA composition to use in a multi-layered structure with the polycarbonate layer to improve the adhesion of the adhesives to the substrate.

6. Claims 2-3 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over NITTO DENKO CORPORATION in view of Johnson et al. and Ehrenberg et al. as applied to claims 1, 4-6, and 10-13 above, and further in view of Hartman et al.

7. The references apply as above for a waterstop sealing material. NITTO DENKO also teaches that adhesives may be included on both sides of the foam substrate (p. 11 lines 52-56) and that the substrates may be composites of metal foils or resin films on synthetic resin films, where foamed materials are given as possible synthetic resin films (p. 11 lines 34-46). NITTO DENKO notes acrylic or rubber adhesives as conventionally used PSA compositions (p. 12 lines 17-25). However, the reference lacks mention of using a different PSA composition on the side opposite of the polycarbonate-containing PSA layer. Hartman discloses double-sided foam tapes, where acrylic and rubber adhesives are used. Hartman teaches that the use of different adhesive compositions on each side of the foam would be advantageous, since each adhesive layer is generally not adhered to the same substrate (col. 6 lines 38-52). Thus, it would have

been prima facie obvious to apply a different PSA to the opposing side of the foam sealing material to adhere the materials to two different substrates.

***Response to Arguments***


8. In response to the applicant's arguments that NITTO DENKO does not teach the cellular structure of the foams used or the multi-layer structure comprising a subbing layer, the examiner has included secondary references to support the conventionality of such features.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (703) 308-6539. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb  
October 4, 2002

  
James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700